



# Carbon Cap & Trade

Consequences to the American Economy

# Climate Science is Uncertain



**Water Vapor (H<sub>2</sub>O) most abundant and dominant GHG**

Far exceeds total combined effect of increase in all GHGs including CO<sub>2</sub>



**Climate Models Do Not Reflect Past / Cannot Predict Future**

Cannot even model clouds (water vapor) – the largest greenhouse gas



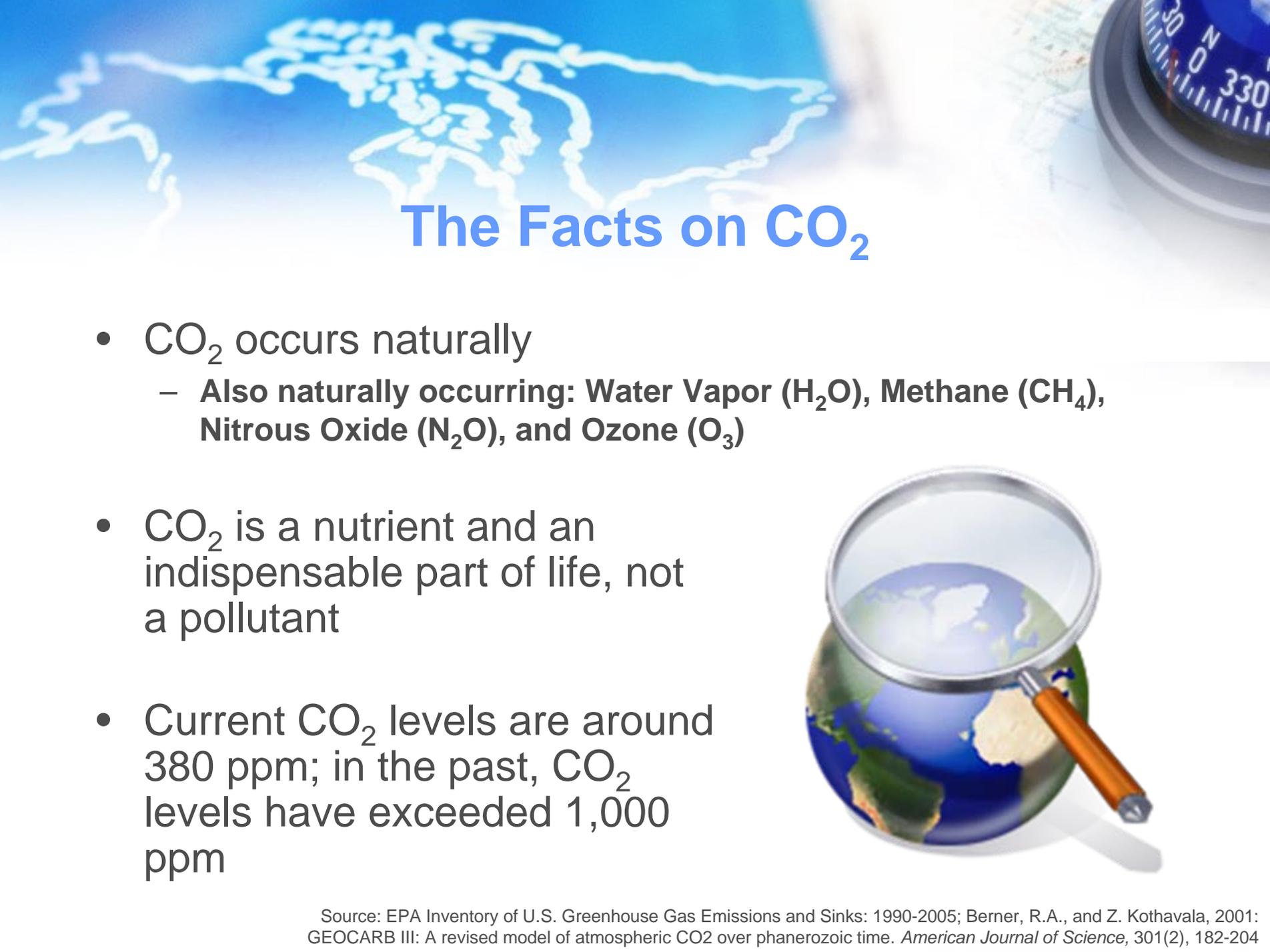
**Ice Core Data shows CO<sub>2</sub> lags temp. by 200-1000 Years**

CO<sub>2</sub> increased 100's of years after warming of last three de-glaciations



**Uncertainty of Human Contribution to Warming Earth**

The globe is warming – scientists cannot agree on cause w/ certainty



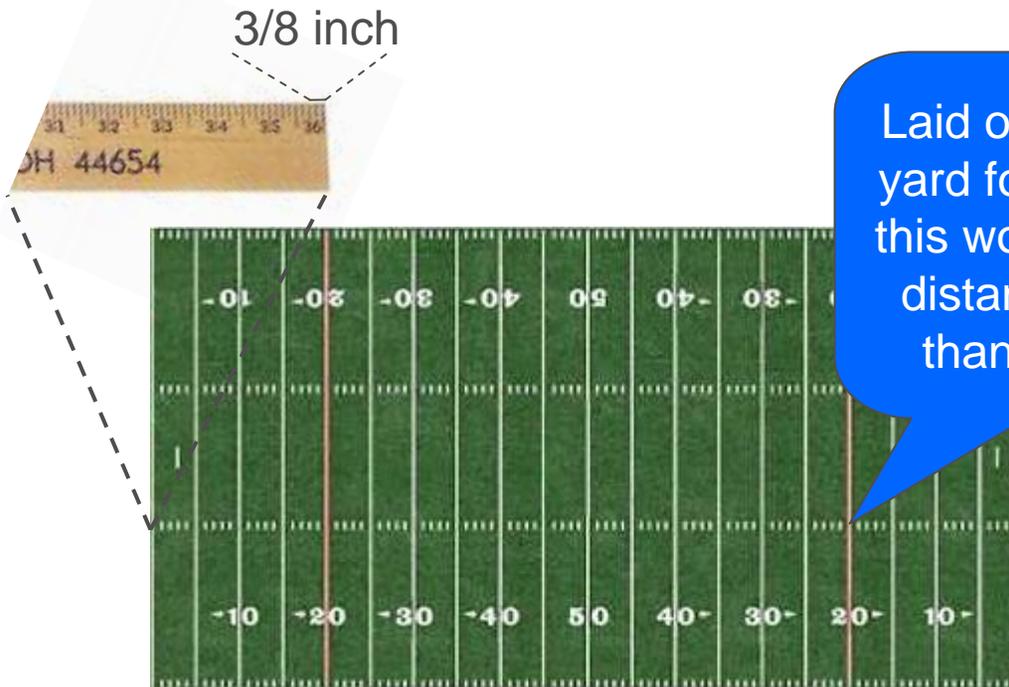
## The Facts on CO<sub>2</sub>

- CO<sub>2</sub> occurs naturally
  - Also naturally occurring: Water Vapor (H<sub>2</sub>O), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), and Ozone (O<sub>3</sub>)
- CO<sub>2</sub> is a nutrient and an indispensable part of life, not a pollutant
- Current CO<sub>2</sub> levels are around 380 ppm; in the past, CO<sub>2</sub> levels have exceeded 1,000 ppm



## Putting CO<sub>2</sub> in Perspective

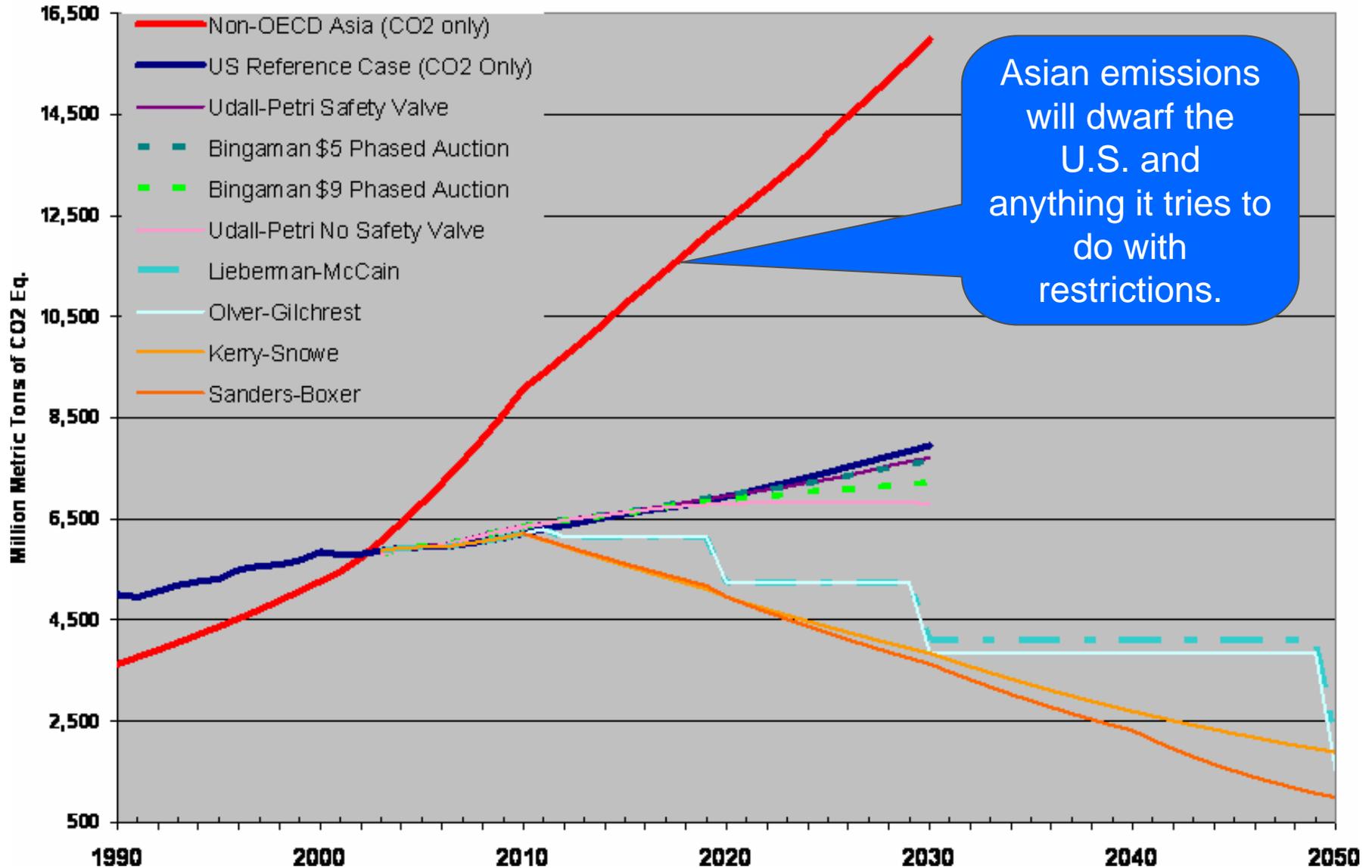
- Water vapor (H<sub>2</sub>O) is present in the atmosphere in concentrations of 3-4% whereas Carbon Dioxide (CO<sub>2</sub>) is at 0.0386%
  - **This would put the entire increase in CO<sub>2</sub> since before the industrial revolution at .0091%**



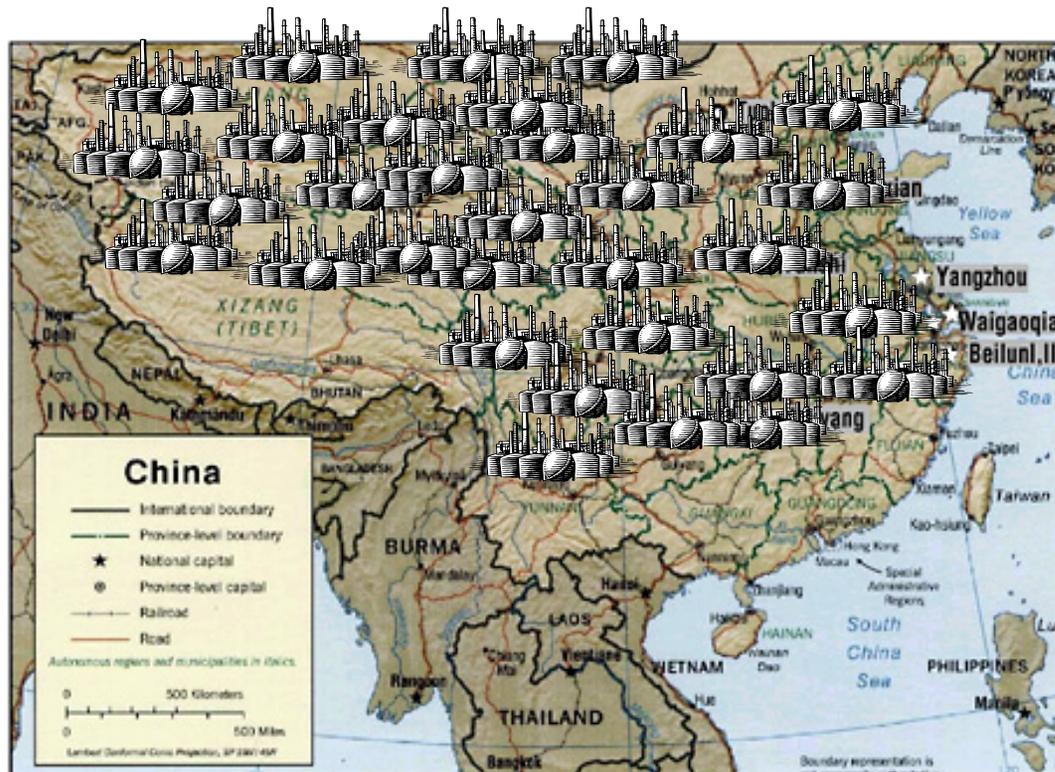
Laid out on a 100 yard football field, this would equal a distance of less than 3/8 inch.

# Carbon Emissions Global Issue

## Comparison of Climate Change Proposals in the 110th Congress 1990-2050



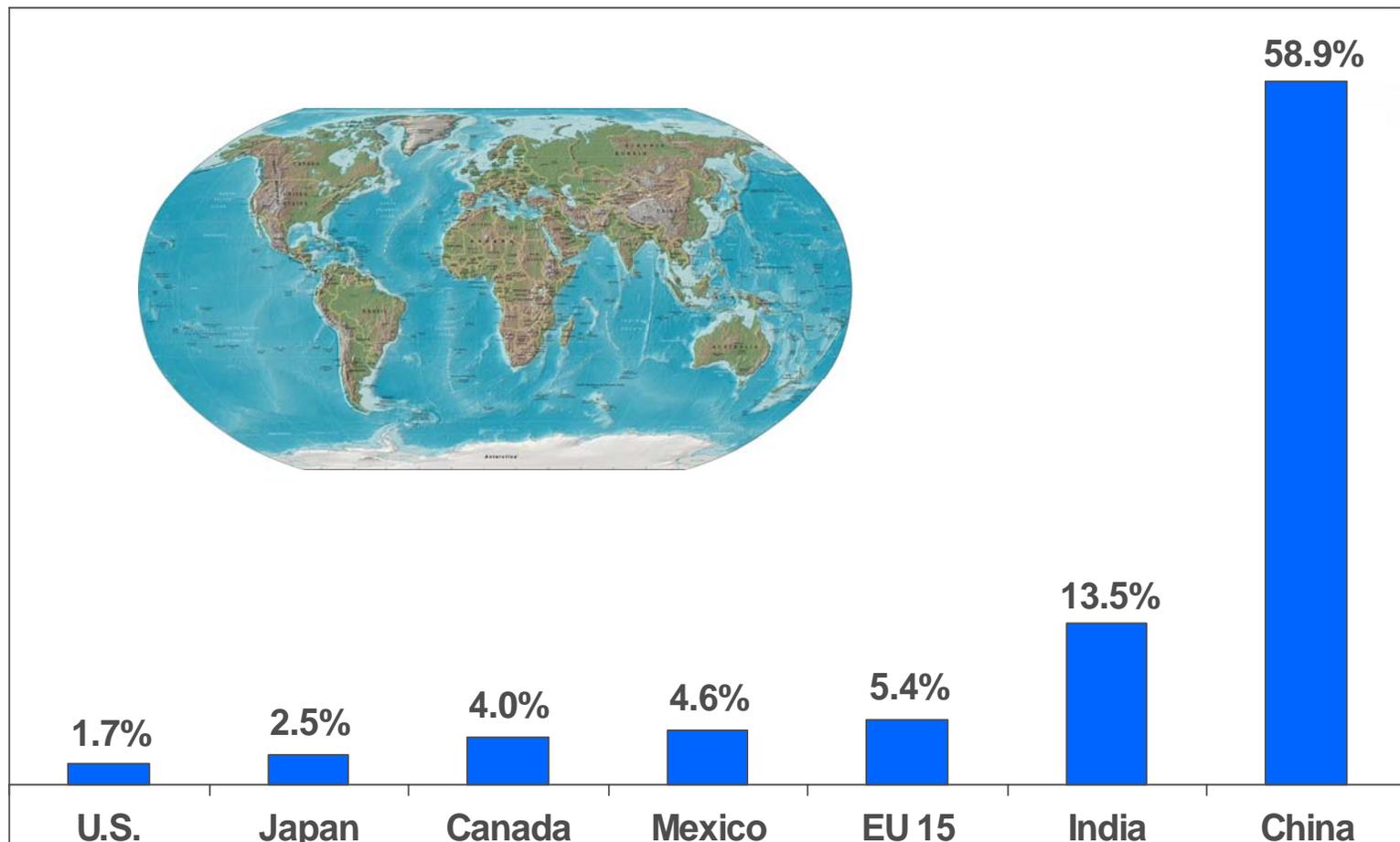
*“Every ten days, China fires up a coal-fueled generating plant big enough to power San Diego. China will construct 2200 new coal plants by 2030.” – George Will*



In under two years, China will add the total generating capacity of Texas.

# Trends in CO<sub>2</sub> Emissions

## from Fossil Fuel Combustion: 2000-2004



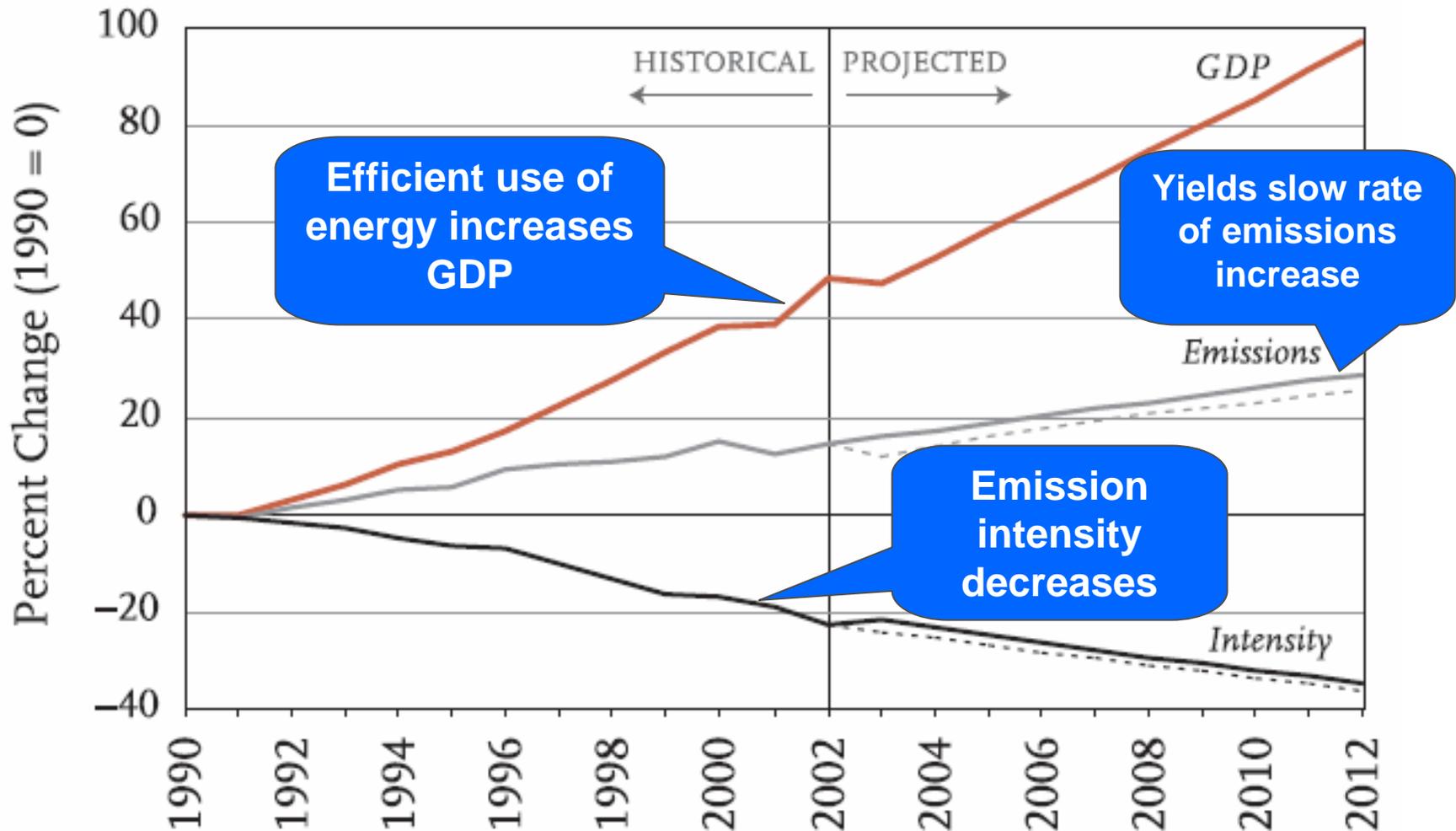
# Al Gore's Stabilization Suggestions

# Energy Policy Act Already Addressing Issues

(75 Democrats supported passage)

More efficient heating and cooling systems, lighting, appliances, and electronic equipment 	Titles 1, 9, & 13
End-use efficiency (design buildings and businesses to use far less energy than they currently do) 	Titles 1, 9, & 13
Increase vehicle efficiency (cars that run on less gas, and more hybrid and fuel-cell cars) 	Titles 7, 8, 9, 13, & 15
Making other changes in transport efficiency (better mass transit systems and heavy trucks that use less fuel) 	Titles 7 & 9
Increase renewable energy (wind, solar and biofuels) 	Titles 2, 7, 8, 9, 12, 13, 15, 16, 17, & 18
Capture and store carbon from power plants and factories 	Titles 4, 9, & 17

# U.S. Historical and Future Trends: GHGs, GDP, and Intensity



NOTE: Dashed lines show Bush Administration target projections.



## Setting Standards for Legislation

- No loss in American GDP
- No definition of CO<sub>2</sub> as pollutant
- Base results on reducing emissions intensity rather than carbon caps
- Provide upfront Cost/Benefit analysis for deployment
- Must establish real societal benefits
  - i.e. increased energy security



## Reality Test for Legislative Debate

- ✓ Will Americans have abundant and affordable electricity?
- ✓ Will we be able to produce our electricity domestically or be reliant on foreign sources?
- ✓ Will controls have measurable benefits on the environment and improve the quality of life for future generations?
- ✓ Will controls push industry to transfer American jobs overseas?



# Solutions at Hand:

Actions that protect the American economy, preserve our ability to grow

## Short-term

- Provide funds to retrofit older coal plants as authorized in Energy Policy Act
- Accelerate new nuclear rules
- Accelerate FutureGen demonstration project
- CAFE Increase?
- Carbon offset incentive?
  - Tax-credit? If so, have auditing mechanism in place to verify

## Long-term

- Promote domestic fuel diversity
  - Hydro, Solar, Wind, Clean Coal, Natural Gas, Nuclear, clean diesel, etc.
- Research and develop carbon sequestration technology
- Advance Coal-To-Liquid initiative
- Promote Hydrogen economy
- Develop workable enforcement framework for international partnerships